

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

REMARKS

This amendment is filed in response to the Office Action dated June 7, 2005.

A one month Extension of Time accompanies this reply to make it timely filed.

New claims 40-46 have been added to this application. They claim a recording medium having a coating that is free of pigment or other additive to improve vehicle penetration. Support for this amendment is found in the last paragraph of page 18. This recording medium is clearly distinguished from those of the prior art which rely on pigments or fillers to absorb the ink carrier. Early allowance of these new claims is respectfully requested.

Claims 1-27 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. The Examiner states that it is unclear what is meant by "polyvinyl alcohol-boric-acid-polyvinyl alcohol bonds" in the specification. Accompanying this amendment is a declaration by inventor Leonard Schliesman. In the declaration, Mr. Schliesman explains that these bonds are hydrogen or physical bonds, compared to the chemical bonds of cross-linking or coagulation. Hydrogen bonding forms an open framework that acts as a sieve allowing the ink carrier to pass therethrough. This open, three-dimensional structure permits transmission of the carrier through the polyvinyl alcohol-boric acid-polyvinyl alcohol framework to the base sheet as taught in the specification. As

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the carrier passes through the sieve, the ink pigments are captured in the sieve and held on the surface of the coating.

In contrast, the prior art teaches the formation of chemical bonds, such as those formed during cross-linking or coagulation. These bonds result in a product with a higher viscosity that is water resistant. The prior art coatings rely on fillers or pigment in the coating to absorb the ink carrier. None of the carrier flows through the coating to the base sheet, as taught in Applicants' invention.

Additionally, claim 1 has been specifically amended to more clearly state that the polyvinyl alcohol-boric acid-polyvinyl alcohol bonds are configured to form the sieve later referenced by the claim.

Claims 1-27 are rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 6,808,767. This patent is the parent of the present application and was directed to the method claims. A timely filed terminal disclaimer is filed herewith to overcome this rejection.

Claims 1, 2 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Riou et al. in U.S. Patent No. 4,877,686. Applicants respectfully traverse this rejection. Riou teaches gelling the polyvinyl alcohol and boric acid to create a barrier to the paper. This polyvinyl alcohol-boric acid-polyvinyl alcohol structure is formed with chemical bonds and is

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very different than that taught in the present application. Riou's structure cannot allow the ink carrier to penetrate the base sheet as required by Applicants' claims. The polyvinyl alcohol-boric acid-polyvinyl alcohol structure of Applicant's claims that allows the carrier to flow through the open structure to the base sheet is not disclosed in Riou. Riou specifically teaches away from this structure, stating that the boric acid-polyvinyl alcohol gel forms a barrier to solvents that fixes the ink drop at the surface of the base sheet (Col. 2, lines 60-69). Since the reference does not teach or suggest a coating structure that allows penetration of the carrier to the base sheet, the rejection is improper and withdrawal of the rejection is requested.

Claims 1, 2 and 4-16 are rejected under 35 U.S.C. § 103(a) as being obvious to add a cationic mordant in the ink receptive layer to facilitate dye fixation. Applicants respectfully traverse this rejection as the Examiner has not established a *prime facie* case of obviousness. Riou teaches that the coating forms a barrier to solvents and fixes the ink droplets. This would be rendered inoperative by the use of a coating with an open structure that allows penetration of the base sheet by the ink carrier. There would be no likelihood of success if the open structure of Applicants' composition were substituted for Riou's barrier layer. Additionally, the reference does not teach or suggest all elements of Applicants' claims, including the use of a polyvinyl alcohol-boric acid structure that forms a sieve and

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allows the ink carrier to pass through it. Since no *prime facie* case of obviousness has been established, the rejection is not proper and should be withdrawn.

Claims 1 and 17-25 stand rejected under 35 U.S.C. § 103(a) as being obvious over Riou in view of Moore et al. in U.S. Patent No. 4,880,498. This rejection is respectfully traversed. Moore teaches many conventional paper parameters, but fails to disclose a polyvinyl alcohol-boric acid coating having a sieve-type structure that allows penetration of the ink carrier to the base sheet. Arguments presented above regarding the Examiner's failure to establish a *prime facie* case of obviousness are reasserted here. Moore does not add any teaching or disclosure that provides a likelihood of success or full disclosure of all elements of Applicants' claims. Since no *prime facie* case of obviousness has been established, this rejection should be found to be improper and should be withdrawn.

Claims 1-15 stand rejected under 35 U.S.C. 102(e) as being anticipated by Tokunaga et al. in U.S. Patent No. 6,403,162. Applicants respectfully traverse this rejection. Tokunaga fails to establish a *prime facie* case of obviousness for the same reasons as the Riou reference above, and those arguments are reasserted here. Tokunaga's claims may cover the use of a porous support (which is Applicants' base sheet) but it does not disclose its use. Nor does this reference disclose the use of a coating that allows the ink carrier to penetrate the coating to the base sheet. There would be no likelihood of success if

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Applicants' coating were used in the ink jet recording material of Tokunaga since the reference teaches away from coatings such as those used by Applicants. Tokunaga specifically adds the boric acid for the purpose of making the ink-receptive layer water resistant (column 7, lines 21-45), teaching away from Applicants' water-permeable ink-receptive layer. Applicants request that the present rejection be withdrawn since there is no likelihood of success and all elements of Applicants' claims are not taught, thus failing to establish a *prime facie* case of obviousness.

Claims 1 and 17-27 further stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tokunaga et al. and further in view of Moore et al in U.S. Patent No. 4,880,498. This rejection is respectfully traversed. Tokanaga fails to disclose all elements of Applicants' claims as discussed above. Those arguments asserted above are reasserted here. As described above with respect to Riou, Moore adds nothing to supply a likelihood of success or disclosure of a coating that allows penetration of the ink carrier to the base sheet. These arguments set forth with respect to Riou are reasserted here. Thus, Tokunaga cannot anticipate Applicants' claims and no *prime facie* case of obviousness has been established.

Applicants respectfully suggest that in the outstanding Action, the rejections evidence "picking and choosing" features of various references and combining them when there is no suggestion in those references to do so. It is impermissible within the framework

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of a 35 U.S.C. § 103 rejection to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. The Examiner has ignored statements that the ink-receptive layer is water resistant in each of the references. These statements clearly teach away from Applicants' claimed composition.

Furthermore, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. Teachings of references can be combined only if there is some suggestion or incentive to do so. None of these references, whether cited or of record, taken either alone or in combination, disclose or suggest the invention as claimed. The references do not teach, suggest or exemplify a coating for an ink-jet paper that allows penetration of the ink carrier to the base paper.

The Examiner has also impermissibly used hindsight to reconstruct Applicants' product where there is no teaching or suggestion to do so. Applicants' issued patent to the method, U.S. Patent No. 6,808,767, teaches the method of making the coating of the subject application. Cooking of the polyvinyl alcohol and boric acid dissolves these components in water. The boric acid will not go into solution by simply adding it to the polyvinyl alcohol and water. Chemical reactions that result a gelled or hardened structure are not initiated.

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Instead of cross-linking or gelling the polyvinyl alcohol and boric acid, hydrogen bonds form as the coating dries. The method of making the coating thus results in the formation of an open, sieve-like structure that allows penetration of the ink carrier to the base sheet. Although it is foreseeable that pigments or fillers could be used, the coating does not require fillers to absorb the ink carrier because the carrier is absorbed by the base sheet. In many of the rejections of the outstanding office action, the Examiner has cited similar ingredients, then blindly assumed that the same coating results. This is not the case here because the Examiner has not considered that different methods of combining the ingredients can result in different products. Absent Applicants' disclosure, one skilled in the art would not be able to make the instant ink-receiving layer from the cited references.

By the above arguments and amendments, Applicants believe that they have complied with all requirements expressly set forth in the pending Office Action. Issuance of a Notice of Allowance on the remaining allowed claims is respectfully requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone

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interview, she is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,
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